WHAT IS CLAIMED IS:

1. A sound location detecting system, comprising:

a first microphone located at a first location to detect acoustic waves at the first location;

a second microphone located at a second location to detect the acoustic waves at the second location;

at least one acoustically reflective surface to reflect the acoustic waves;

an acoustic analysis device to detect and analyze the acoustic waves; and

a processing device to determine a spatial location of a source of the acoustic waves.

2. The sound location detecting system according to claim 1, wherein the at least one acoustically reflective surface has an irregular shape.

3. The sound location detecting system according to claim 1, wherein the at least one acoustically reflective surface is shaped like a human pinnea.

4. The sound location detecting system according to claim 1, wherein the at least one acoustically reflective surface has low acoustic absorption properties.

5. The sound location detecting system according to claim 1, wherein the processing device directs an observation device in a direction of the spatial location of the source of the acoustic waves.

6. The sound location detecting system according to claim 1, further including a calibration device to create a set of phase signature tables associating phase angles, between when the acoustic waves reach the first microphone and when the acoustic waves reach the second microphone, with detected frequencies at a predetermined spatial location.

7. A method of determining a spatial location of a source of acoustic waves, comprising:

using a first microphone to detect the acoustic waves at a first location;

using a second microphone to detect the acoustic waves at a second location;

using at least one acoustically reflective surface to reflect the acoustic waves in a direction of the first location and the second location;

analyzing the acoustic waves; and

determining a spatial location of a source of the acoustic waves.

8. The method according to claim 7, wherein the at least one acoustically reflective surface has an irregular shape.

9. The method according to claim 7, wherein the at least one acoustically reflective surface has low acoustic absorption properties.

10. The method according to claim 7, wherein the method further includes directing an observation device in a direction of the determined spatial location of the source of the acoustic waves.

11. The method according to claim 7, further including creating a set of phase signature tables associating phase angles, between when the acoustic waves reach the first location and when the acoustic waves reach the second location, with detected frequencies at a predetermined spatial location.

12. A sound location detecting device, comprising:

a computer-readable medium; and

a computer-readable program code, stored on the computer-readable medium, having instructions to

use a first microphone to detect acoustic waves at a first location;

use a second microphone to detect the acoustic waves at a second location;

reflect the acoustic waves in a direction of the first microphone and the second microphone;

analyze the acoustic waves; and

determine a spatial location of a source of the acoustic waves.

13. The sound location detecting device according to claim 12, wherein at least one acoustically reflective surface is utilized to reflect the acoustic waves.

14. The sound location detecting device according to claim 13, wherein the at least one acoustically reflective surface has an irregular shape.

15. The sound location detecting system according to claim 13, wherein the at least one acoustically reflective surface has low acoustic absorption properties.

16. The sound location detecting system according to claim 12, wherein the computer-readable program code includes instructions to direct an observation device in a direction of a determined spatial location of the source of the acoustic waves.

17. The sound location detecting system according to claim 12, wherein the computer-readable program code includes instructions to set a first delay to delay an output of the first microphone and a second delay to delay an output of the second microphone, based upon the spatial location of the source of the acoustic waves

18. The sound location detecting system according to claim 12, wherein the computer-readable program code includes instructions to create a set of phase signature tables associating phase angles, between when the acoustic waves reach the first location and when the acoustic waves reach the second location, with detected frequencies at a predetermined spatial location.

19. A method of creating a phase signature table, comprising:

emitting acoustic waves of known frequencies from predetermined spatial locations;

using a first microphone to detect the acoustic waves at a first location;

using a second microphone to detect the acoustic waves at a second location;

determining a phase angle between when the acoustic waves reach the first location and when the acoustic waves reach the second location, for each of the known frequencies; and

associating the phase angles with the known frequencies at each of the predetermined spatial locations.

20. The method according to claim 19, further including reflecting the acoustic waves in a direction of each of the first location and the second location.

21. The method according to claim 20, wherein at least one irregularly shaped surface is utilized to reflect the acoustic waves.

22. The method according to claim 21, wherein the at least one irregularly shaped surface is shaped like a human pinnea.

23. A phase signature table creation device, comprising:

a computer-readable medium; and

a computer-readable program code, stored on the computer-readable medium, having instructions to

emit acoustic waves of known frequencies from predetermined spatial locations;

use a first microphone to detect the acoustic waves at a first location;

use a second microphone to detect the acoustic waves at a second location;

determine a phase angle between when the acoustic waves reach the first location and when the acoustic waves reach the second location, for each of the known frequencies; and

associate the phase angles with the known frequencies at each of the predetermined spatial locations.

24. The phase signature table creation device according to claim 23, wherein the computer-readable program code includes instructions to reflect the acoustic waves in a direction of each of the first location and the second location.

25. The phase signature table creation device according to claim 23, wherein at least one irregularly shaped surface is utilized to reflect the acoustic waves.

26. The phase signature table creation device according to claim 25, wherein the at least one irregularly shaped surface is shaped like a human pinnea.